

Binder

See 1890A

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
Washington, D.C.

Exemption No. 1870

Regulatory Docket No. 13203

September 14, 1973

THE BOEING COMPANY
P. O. BOX 3707
SEATTLE, WASHINGTON 98124

BY TELEGRAM OF SEPTEMBER 5, 1973, THE BOEING COMPANY, P.O. BOX 3707, SEATTLE, WASHINGTON 98124, PETITIONED FOR AN EXEMPTION FROM SECTIONS 25.807(C)(1), 25.809(F)(1), AND 25.813(B) OF THE FEDERAL AVIATION REGULATIONS TO PERMIT TYPE CERTIFICATION OF BOEING MODELS 747-200F AND 747-200C (FREIGHTER MODELS) FOR CARRIAGE OF UP TO THREE PERSONS IN ADDITION TO FIVE FLIGHT CREW MEMBERS ON THE AIRPLANE UPPER DECK.

SECTIONS 25.807(C)(1) AND (5) OF THE FEDERAL AVIATION REGULATIONS REQUIRE, IN PERTINENT PART, THAT AIRPLANES HAVING A PASSENGER SEATING CAPACITY IN THE RANGE FROM 1 THROUGH 9, INCLUSIVE, ON WHICH THE VERTICAL LOCATION OF THE WING DOES NOT PERMIT INSTALLATION OF TYPE IV EXITS, BE FITTED WITH AN EMERGENCY EXIT HAVING AT LEAST THE DIMENSIONS OF A TYPE III EMERGENCY EXIT ON EACH SIDE OF THE FUSELAGE. THESE AIRPLANES HAVE ONE CREW SERVICE DOOR ON THE RIGHT HAND SIDE OF THE UPPER DECK WHICH IS DIMENSIONALLY EQUIVALENT TO A TYPE I EMERGENCY EXIT. AS IT HAS A STEP-UP FEATURE, IT CANNOT BE CLASSIFIED AS A TYPE I. THERE IS AN OVERHEAD CREW HATCH (COMPLYING WITH SECTION 25.805(b)), SLIGHTLY OFF-SET TO THE LEFT AND APPROXIMATELY LONGITUDINALLY CENTERED IN THE COCKPIT AREA, THAT PETITIONER WISHES TO BE DESIGNATED AS AN EMERGENCY EXIT FOR THE USE OF PERSONS OTHER THAN CREWMEMBERS. SECTION 25.809(F)(1) REQUIRES AN APPROVED MEANS TO ASSIST OCCUPANTS IN DESCENDING TO THE GROUND, SUCH ASSIST MEANS BEING A SELF-SUPPORTING SLIDE OR EQUIVALENT. THE CREW SERVICE DOOR ASSIST MEANS MEETS THE REQUIREMENTS OF SECTION 25.809(F)(1) IN ITS ENTIRETY. HOWEVER, THE ASSIST MEANS FROM THE OVERHEAD HATCH ARE INERTIA REELS WHICH DO NOT MEET THAT REGULATION. THERE ARE EIGHT INERTIA REELS PROVIDED AND THREE BODY SAFETY HARNESSSES FOR THE THREE PERSONS OTHER THAN FLIGHT CREW. SECTION 25.813(B) REQUIRES AN ASSIST SPACE BE PROVIDED NEXT TO EACH EXIT. ASSIST SPACE IS NOT PROVIDED ON THESE AIRPLANE MODELS.

IN SUPPORT OF ITS REQUEST FOR EXEMPTION, THE PETITIONER HAS PRESENTED VARIOUS INFORMATION AND DATA RELATED TO THE EVACUATION CAPABILITIES OF THE UPPER DECK EXITS FOR THE EMERGENCY EGRESS OF FIVE FLIGHT CREW-MEMBERS, PLUS THREE PERSONS WHOSE CARRIAGE OF THE UPPER DECK IS NECESSARY AND CONSISTENT WITH THE FREIGHT-CARRYING MISSION OF THE MODELS DESCRIBED HEREIN. AMONG THESE ARE ANALYSES, AND TEST RESULTS, SHOWING EVACUATION RATES FROM THE RIGHT HAND CREW SERVICE DOOR EXIT OF 56 UPPER DECK OCCUPANTS IN 90 SECONDS, AND FROM THE OVERHEAD EXIT, UTILIZING INERTIA REEL DEVICES, OF 8 OCCUPANTS IN 86 SECONDS.

FROM REVIEW OF THESE ANALYSES AND TEST RESULTS, THE FAA CONCLUDES THAT THE EMERGENCY EVACUATION MEANS PROVIDED THE OCCUPANTS OF THE UPPER DECK OF THE MODELS 747-200F AND 747-200C (MAIN DECK CARGO CONFIGURATION) ARE EFFECTIVE AND WILL NOT ADVERSELY AFFECT SAFETY. IN MAKING THIS FINDING, THE FAA HAS TAKEN INTO ACCOUNT, AMONG OTHER THINGS, THE QUALIFICATION OF THE THREE PERSONS IN ADDITION TO THE FIVE FLIGHT CREWMEMBERS. THE THREE ARE NOT QUALIFIED AS CREW, AS THAT TERM IS USED IN FAR 25, BUT ARE CONSIDERED AT A LEVEL OF TRAINING HIGHER THAN PASSENGERS. IN VIEW OF THE LIMITED NUMBER OF PERSONNEL TO BE EVACUATED, THE FAA HAS DETERMINED THAT THE ASSIST SPACE REQUIRED BY SECTION 25.813(B) IS UNNECESSARY.

PETITIONER STATES THAT GRANTING THE EXEMPTION WOULD BE IN THE PUBLIC INTEREST BECAUSE THE FLEXIBILITY OF THE AIRPLANE WOULD INCREASE ITS EFFICIENCY AND WOULD TEND TO LOWER FREIGHT FARES. THE AVAILABILITY OF THIS AIRPLANE WILL RESULT IN INCREASED SALES, THUS HELPING TO SUPPLY A PUBLIC NEED FOR AN INCREASE IN THE CARGO CAPABILITIES OF THE AIRLINES.

IN CONSIDERATION OF THE FOREGOING, I FIND THAT THE GRANTING OF AN EXEMPTION, TO THE EXTENT DESCRIBED BELOW, WOULD NOT ADVERSELY EFFECT SAFETY AND IS IN THE PUBLIC INTEREST. THEREFORE, PURSUANT TO THE AUTHORITY CONTAINED IN SECTIONS 313(A) AND 601(C) OF THE FEDERAL AVIATION ACT OF 1958 WHICH HAS BEEN DELEGATED TO ME BY THE ADMINISTRATOR (14 CFR 11.53), THE BOEING COMPANY IS HEREBY GRANTED AN EXEMPTION FROM SECTIONS 25.807(C)(1) AND (5), 25.809(F)(1), AND 25.813(B) OF THE FEDERAL AVIATION REGULATIONS TO THE EXTENT NECESSARY TO PERMIT TYPE CERTIFICATION OF THE MODELS 747-200F AND 200C [MAIN DECK CARGO CONFIGURATION] FOR CARRIAGE ON THE UPPER DECK OF NOT MORE THAN THREE PERSONS OTHER THAN FLIGHT CREWMEMBERS WHEN THE UPPER DECK IS CONFIGURED WITH ONE APPROVED EMERGENCY EXIT HAVING THE DIMENSIONS OF A TYPE I EMERGENCY EXIT AND ONE APPROVED EMERGENCY EXIT HATCH FOR CREWMEMBERS THAT ALSO HAS INERTIA REEL AND HARNESS PROVISIONS FOR THE THREE PERSONS, SUBJECT TO THE FOLLOWING CONDITION.

THE FAA-APPROVED AIRPLANE FLIGHT MANUAL MUST CONTAIN AN OPERATING LIMITATION RESTRICTING UPPER DECK OCCUPANCY BY NON-CREWMEMBERS TO A MAXIMUM OF THREE PERSONS DESIGNATED BY THE OPERATOR THAT ARE -

1. ASSIGNED SOME DUTY ASSOCIATED WITH THE OPERATION OF THE AIRPLANE;
2. BRIEFED BY A FLIGHT CREWMEMBER ON THE USE OF THE ESCAPE MEANS PRIOR TO EACH FLIGHT; AND
3. FOUND BY THE OPERATOR TO BE PHYSICALLY ABLE TO USE THE ESCAPE MEANS PROVIDED.

/s/ JAMES M. VINES
 ACTING DIRECTOR
 FLIGHT STANDARDS SERVICE

ISSUED IN WASHINGTON, D.C., ON SEPTEMBER 14, 1973.